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EXAMINER

NGUYEN, HAI V

ART UNIT PAPER NUMBER

2142

DATE MAILED: 01/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/842,801

Applicant(s)

BARETZKI, LAURENT

Examiner

Hai V. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This Office Action is in response to the communication received on 16 November 2005
2. Claims 17-42 are presented for examination.

Response to Arguments

3. Applicant's arguments with respect to claims 17, 39 in Appeal Brief filed on 16 November 2005 have been considered and are persuasive and, therefore, the finality of the rejection of the last Office Action is withdrawn. The new ground(s) of rejection is follows:

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 17-42 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over **Massey, Jr. et al. U.S. patent 5,016,244**.
6. As to claim 17, Massey, Method For Controlling Failover Between Redundant Network Interface Modules, teaches substantially the invention as claimed, including a redundant routing system, comprising:
a first routing unit (*Fig. 1, item 20A, NIM-A*) configured to manage input and output data;

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a second routing unit (*Fig. 1, item 20B, NIM-B*) configured to manage input and output data;

a network interface (*Fig. 1, item 12 (LCN 12) or item 14 (UCN 14)*) connecting said first and second routing units;

a standby bus interface (*Fig. 1, a communication bus 16 or a communication bus 18*) connecting said first and second routing units to each other;

wherein, when said first routing unit is managing said input and output data, said second routing unit is configured to detect a failure of said first routing unit by monitoring both said network and standby bus interfaces (*Fig. 1, col. 1, lines 24-31; col. 1, line 66 - col. 3, line 3; col. 3, line 23 - col. 4, line 45; col. 3, line 46 - col. 5, line 51*); and

wherein, when said second routing unit detects a failure of said first routing unit, said second routing unit is configured to deactivate said first routing unit so that said first routing unit no longer manages said input and output data and said second routing unit is further configured to start managing said input and output (*Massey, Abstract, After five such attempts, NIM-B sends a message to NIM-A over LCN bus 16 commanding NIM-A to terminate operations and NIM-B takes over the functions of NIM-A, Figs. 1-2, col. 5, line 52 - col. 6, line 45*).

7. It would have been obvious to one of ordinary skill in the computer networking art at the time of the invention was made that the claimed invention differed from the teachings of Massey only by a degree, e.g., in the claimed standby bus interface. But this no more than a difference in a degree because a standby bus interface whether it is designated as a standby bus interface or a backup bus interface or just a

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communication bus interface taught by Massey, they provide a backup communication for the system. The heart of the invention is providing a redundant routing system so that in case a failure of one network device the media can be fetched from another network device to provide a smooth operation. Massey invention exactly was directed to the same purpose, i.e., to provide the primary module's failover in deference to the secondary and in which the secondary module determines that the primary module has failed in order to assume the role of the primary module (*Massey, col. 1, lines 24-31*). Other claimed elements of the dependent claims are all obvious variation of the well-known features of a redundant system and rejected accordingly.

8. As to claim 18, Massey discloses, wherein said first and second routing units have identical functions and include identical software and configuration files (*Fig. 1, col. 1, lines 24-31; col. 1, line 66 - col. 3, line 3; col. 3, line 23 – col. 4, line 45; col. 3, line 46 – col. 5, line 51*).

9. As to claim 19, Massey discloses, further comprising at least one serial link connecting said first and second routing units to at least one other system (*Fig. 1, col. 1, lines 24-31; col. 1, line 66 - col. 3, line 3; col. 3, line 23 – col. 4, line 45; col. 3, line 46 – col. 5, line 51*).

10. As to claim 20, Massey discloses, wherein said at least one serial link comprises at least one Y-split cable (*Fig. 1, col. 1, lines 24-31; col. 1, line 66 - col. 3, line 3; col. 3, line 23 – col. 4, line 45; col. 3, line 46 – col. 5, line 51*).

11. As to claim 21, Massey discloses, when said first routing unit detects a failure in itself, said first routing unit is configured to deactivate itself to cease managing said

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input and output data and allow said second routing unit to start managing said input and output data (*Fig. 1, col. 1, lines 24-31; col. 1, line 66 - col. 3, line 3; col. 3, line 23 – col. 4, line 45; col. 3, line 46 – col. 5, line 51*).

12. As to claim 22, Massey discloses, wherein said first routing unit deactivates itself and activates said second routing unit by a change in an impedance of at least one input/output serial port (*Fig. 1, col. 1, lines 24-31; col. 1, line 66 - col. 3, line 3; col. 3, line 23 – col. 4, line 45; col. 3, line 46 – col. 5, line 51*).

13. As to claim 23, Massey discloses, wherein the change in impedance imparts putting said at least one input/output serial port in a high impedance state (*Fig. 1, col. 1, lines 24-31; col. 1, line 66 - col. 3, line 3; col. 3, line 23 – col. 4, line 45; col. 3, line 46 – col. 5, line 51*).

14. As to claim 24, Massey discloses, wherein said second routing unit deactivates said first routing unit by sending a reset command to said first routing unit via the standby bus, said reset command executing a reset algorithm on said first routing unit (*Fig. 1, col. 1, lines 24-31; col. 1, line 66 - col. 3, line 3; col. 3, line 23 – col. 4, line 45; col. 3, line 46 – col. 5, line 51*).

15. As to claim 25, Massey discloses, wherein polling messages are exchanged via said network and standby bus interfaces, said polling messages carrying information relevant to detecting said failure (*Fig. 1, col. 1, lines 24-31; col. 1, line 66 - col. 3, line 3; col. 3, line 23 – col. 4, line 45; col. 3, line 46 – col. 5, line 51*).

16. As to claim 26, Massey discloses, wherein said second routing unit detects said failure of said first routing unit when said polling messages are not properly responded

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to on at least one of said network and standby bus interfaces (*Fig. 1, col. 1, lines 24-31; col. 1, line 66 - col. 3, line 3; col. 3, line 23 – col. 4, line 45; col. 3, line 46 – col. 5, line 51*).

17. As to claim 27, Massey discloses, wherein sets of parameters necessary to interpret the polling messages, comprising the messages themselves, at least one transmission interval between the messages, and at least one time limit between two messages (*Figs. 1-2, col. 1, lines 24-31; col. 1, line 66 - col. 3, line 3; col. 3, line 23 – col. 4, line 45; col. 3, line 46 – col. 5, line 51; col. 2, line 52 – col. 8, line 49*).

18. As to claim 28, Massey discloses, wherein, when launching an application on said first and second routing units, a set of parameters appropriate to said application is loaded into a random access memory (RAM) (*Figs. 1-2, col. 1, lines 24-31; col. 1, line 66 - col. 3, line 3; col. 3, line 23 – col. 4, line 45; col. 3, line 46 – col. 5, line 51; col. 2, line 52 – col. 8, line 49*).

19. As to claim 29, Massey discloses, wherein said network interface links said first and second routing units with at least one remote client system (*Figs. 1-2, col. 1, lines 24-31; col. 1, line 66 - col. 3, line 3; col. 3, line 23 – col. 4, line 45; col. 3, line 46 – col. 5, line 51; col. 2, line 52 – col. 8, line 49*).

20. As to claim 30, Massey discloses, wherein said network interface is the Internet (*Figs. 1-2, col. 1, lines 24-31; col. 1, line 66 - col. 3, line 3; col. 3, line 23 – col. 4, line 45; col. 3, line 46 – col. 5, line 51; col. 2, line 52 – col. 8, line 49*).

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21. As to claim 31, Massey discloses, wherein said network interface is an Ethernet network (*Figs. 1-2, col. 1, lines 24-31; col. 1, line 66 - col. 3, line 3; col. 3, line 23 – col. 4, line 45; col. 3, line 46 – col. 5, line 51; col. 2, line 52 – col. 8, line 49*).

22. As to claim 32, Massey discloses, wherein said network interface is a digital local area network (LAN) (*Figs. 1-2, col. 1, lines 24-31; col. 1, line 66 - col. 3, line 3; col. 3, line 23 – col. 4, line 45; col. 3, line 46 – col. 5, line 51; col. 2, line 52 – col. 8, line 49*).

23. As to claim 33, Massey discloses, wherein said first and second routing units operate in Open Communication Processor (OCP) mode (*Figs. 1-2, col. 1, lines 24-31; col. 1, line 66 - col. 3, line 3; col. 3, line 23 – col. 4, line 45; col. 3, line 46 – col. 5, line 51; col. 2, line 52 – col. 8, line 49*).

24. As to claim 34, Massey discloses, an alert protocol to warn of a possible failure of the system (*Figs. 1-2, col. 1, lines 24-31; col. 1, line 66 - col. 3, line 3; col. 3, line 23 – col. 4, line 45; col. 3, line 46 – col. 5, line 51; col. 2, line 52 – col. 8, line 49*).

25. As to claim 35, Massey discloses, wherein said first and second routing units are data routers (*Figs. 1-2, col. 1, lines 24-31; col. 1, line 66 - col. 3, line 3; col. 3, line 23 – col. 4, line 45; col. 3, line 46 – col. 5, line 51; col. 2, line 52 – col. 8, line 49*).

26. As to claim 36, Massey discloses, wherein said first and second routing units are data servers (*Figs. 1-2, col. 1, lines 24-31; col. 1, line 66 - col. 3, line 3; col. 3, line 23 – col. 4, line 45; col. 3, line 46 – col. 5, line 51; col. 2, line 52 – col. 8, line 49*).

27. As to claim 37, Massey discloses, wherein, after said second routing unit is activated and starts managing input and output data, said first routing unit is configured to detect a failure of said second routing unit (*Figs. 1-2, col. 1, lines 24-31; col. 1, line 66*

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- *col. 3, line 3; col. 3, line 23 – col. 4, line 45; col. 3, line 46 – col. 5, line 51; col. 2, line 52 – col. 8, line 49).*

28. As to claim 38, Massey discloses, wherein, when said first routing unit detects a failure in itself, said first routing unit is configured to deactivate itself to cease managing said input and output data and allow second routing unit to start managing said input and output data (*Figs. 1-2, col. 1, lines 24-31; col. 1, line 66 - col. 3, line 3; col. 3, line 23 – col. 4, line 45; col. 3, line 46 – col. 5, line 51; col. 2, line 52 – col. 8, line 49).*

29. Claim 39 is corresponding system in means plus function of claim 17; therefore, it is rejected under the same rationale as in claim 17.

30. Claims 40-42 have similar limitation of claims 19, 21, 25; therefore, they are rejected under the same rationale as in claim 19, 21, 25.

31. Further references of interest are cited on Form PTO-892, which is an attachment to this action.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai V. Nguyen whose telephone number is 571-272-3901. The examiner can normally be reached on 6:00-3:30 Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on 571-272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hai V. Nguyen
Examiner
Art Unit 2142



THONG VU
P.E.

